

## CLAIMS

1. An audio headset, comprising:

a first ear piece having a microphone for converting an audio input into electrical transmit signals; and

a second ear piece having an ear phone for converting electrical receive signals into an audio output.

2. An audio headset according to claim 1 including an acoustical isolator positioned within the first ear piece for substantially isolating the microphone from audio signals attributed to bone conduction.

3. An audio headset according to claim 2 wherein the acoustical isolator comprises a material having a substantial air content surrounding sides and a back portion of the microphone.

4. An audio headset according to claim 1 wherein the microphone includes a piezo electric transducer for locating in an external ear canal of a user, the piezo electric transducer generating the electrical transmit signals from the audio input of the user detected in the external ear canal.

5. An audio headset according to claim 1 including a first wire coupled from the microphone to a first connection for outputting the transmit signals, a second wire coupled from the earphone to a second connection for receiving the receive signals, and a third wire for coupling the microphone and the earphone to a ground connection.

5      6.      An audio headset according to claim 5 wherein the first, second and third  
wires are contained within a single flexible cord.

7. An audio headset according to claim 5 wherein the first connection, second connection and the ground connection each comprise separate connections on a plug  
10 connector.

8. An audio headset according to claim 1 wherein the microphone includes a piezo electric transducer.

15      9.      An audio headset according to claim 8 including a transistor having a first  
gating terminal coupled to a first terminal of the transducer, a second output terminal  
for outputting the transmit signal, and a third terminal for coupling to a ground  
connection.

10. An audio headset according to claim 9 including a filter circuit coupled across the second and third terminals of the transistor for filtering out low audio frequencies from the transmit signals.

11. An audio headset according to claim 1 wherein the microphone comprises an  
25 electret.

12. An audio headset according to claim 1 wherein the first ear piece and the second ear piece each include a housing adapted to insert within an external ear canal of a user, the microphone positioned within one of the houses for converting voice signals from the user into the transmit signals.

5 13. A method for operating a headset, comprising:  
adapting a first ear piece for receiving audio signals from a user while located  
within a first ear of the user;  
converting the received audio signals from the first ear piece into transmit  
signals for outputting to a first connector;  
10 adapting a second ear piece for receiving receive signals from a second  
connector while located within a second ear of the user; and  
outputting the receive signals through a transducer in the second ear piece into  
the second ear of the user.

15 14. A method according to claim 13 including acoustically isolating a microphone  
in the first ear piece from audio signals attributed to bone conduction.

15. A method according to claim 13 including using a piezoelectric transducer in  
the first ear piece for generating the electrical transmit signals.

20 16. A method according to claim 13 including:  
outputting the transmit signals from a first wire in the headset;  
receiving the receive signals from a second wire in the headset; and  
grounding the first ear piece and the second ear piece with a third wire in the  
25 headset.

17. A method according to claim 16 including terminating the first, second and  
third wires with separate terminals on a plug connector.

5 18. A method according to claim 13 including using an output of a piezo electric transducer in the first ear piece for generating the transmit signals.

19. A method according to claim 18 including using the transmit signal output from the piezo electric transducer for controlling a transistor output and using the  
10 transistor output as the transmit signals.

20. A method according to claim 19 including electrically filtering out low audio frequencies from the transmit signals.

15 21. A method according to claim 13 including:  
inserting housings for the first and second ear piece into opposite external ear canals of the user, and  
positioning the microphone within the housing for converting voice signals within the inserted external ear canal into the transmit signals.  
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